

1        1. In an computerized system that includes a content server, a mobile gateway,  
2 and one or more mobile clients, wherein the mobile gateway transforms content received  
3 from the content server based on one or more operating characteristics of at least one mobile  
4 client, and wherein the at least one mobile client is unaware of the specific transform applied  
5 to the content, a method of obtaining transformed content from the mobile gateway so that  
6 the transformed content may be sent to the at least one mobile client, the method comprising  
7 the acts of:

8            receiving content at a mobile gateway;

9            applying a first transform to the content, thereby creating a first transformed  
10 content, the first transform specifically considering one or more operating  
11 characteristics of at least one mobile client;

12            storing the first transformed content in a mobile gateway cache;

13            requesting the content from the mobile gateway cache, wherein the request  
14 includes a first transform identifier; and

15            in response to the request for content, returning the first transformed content.

16  
17        2. A method as recited in claim 1 wherein the mobile gateway includes mobile  
18 client data associating the first transform with the at least one mobile client, the method  
19 further comprising the acts of:

20            receiving a request for the content from the at least one mobile client;

21            retrieving the first transform identifier from the mobile client data; and

22            sending the first transformed content to the at least one mobile client.

1       3.     A method as recited in claim 1 further comprising the act of receiving from  
2 the content source, content addressed to two or more mobile clients, wherein the acts of  
3 (i) receiving content at a mobile gateway, (ii) applying a first transform to the content, and  
4 (iii) storing the first transformed content in a mobile gateway cache, are performed in  
5 connection with obtaining transformed content for a first of the two or more mobile clients,  
6 and wherein the acts of (iv) requesting the content from the mobile gateway cache, and  
7 (v) returning the first transformed content in response to the request for content, are  
8 performed in connection with obtaining transformed content for a second of the two or more  
9 mobile clients.

10  
11       4.     A method as recited in claim 3 further comprising the act of sending the first  
12 transformed content to the two or more mobile clients.

13  
14       5.     A method as recited in claim 3 wherein the content comprises a notification.

15  
16       6.     A method as recited in claim 1 wherein the content is identified by a uniform  
17 resource identifier.

18  
19       7.     A method as recited in claim 6 wherein the uniform resource identifier  
20 comprises a uniform resource locator.

21  
22       8.     A method as recited in claim 1 further comprising the act of storing the  
23 content in the mobile gateway cache.

9. A method as recited in claim 1 further comprising the acts of:
  - applying a second transform to the content, thereby creating a second transformed content, the second transform specifically considering one or more operating characteristics of a second mobile client;
  - storing the second transformed content in the mobile gateway cache;
  - requesting the content from the mobile gateway cache, wherein the request includes a second transform identifier; and
  - in response to the request for content, returning the second transformed content.

10. A method as recited in claim 1 wherein the content comprises a first portion of other content, the other content including the first portion and a second portion, the method further comprising the acts of:

requesting the other content from the mobile gateway cache; and

in response to the request for the other content, returning the first transformed content.

WORKMAN, NYDEGGER & SEELEY  
A PROFESSIONAL CORPORATION

ATLANTIC CITY, NEW JERSEY  
ATTORNEYS AT LAW  
1000 EAGLE GATE TOWER  
60 EAST SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111

1           11. A method as recited in claim 10 further comprising the acts of:

2           requesting the second portion of the other content from the content source;

3           storing the second portion of the other content in the mobile gateway cache;

4           applying a transform to the second portion of the other content, thereby

5           creating a second portion transformed content, the transform specifically considering

6           one or more operating characteristics of one or more mobile clients;

7           storing the second portion transformed content in the mobile gateway cache;

8           and

9           in response to the request for the other content, returning the second portion

10           transformed content.

1        12. In an computerized system that includes a content server, a mobile gateway,  
2 and one or more mobile clients, wherein the mobile gateway transforms content received  
3 from the content server based on one or more operating characteristics of at least one mobile  
4 client, and wherein the at least one mobile client is unaware of the specific transform applied  
5 to the content, a method of obtaining transformed content from the mobile gateway so that  
6 the transformed content may be sent to the at least one mobile client, the method comprising  
7 steps for:

caching content in a mobile gateway cache;

transforming the content according to a first transform, thereby creating a first transformed content, wherein the first transform is based on one or more operating characteristics of at least one mobile client;

adding the first transformed content to the mobile gateway cache;

querying the mobile gateway cache for the content, the query including a first transform identifier; and

in response to the query for content, providing the first transformed content.

13. A method as recited in claim 12 wherein the step for providing the first transformed content comprises the acts of:

receiving a request for the content from the at least one mobile client; and

sending the first transformed content to the at least one mobile client;

1       14. A method as recited in claim 13 wherein the mobile gateway includes mobile  
2 client data associating the first transform with the at least one mobile client, and wherein the  
3 step for querying the mobile gateway comprises the act of retrieving the first transform  
4 identifier from the mobile client data.

5

6       15. A method as recited in claim 12 wherein the step for caching content  
7 comprises the act of receiving from the content source, content that is addressed to two or  
8 more mobile clients.

9

10     16. A method as recited in claim 15 wherein the steps for (i) caching content in a  
11 mobile gateway cache, (ii) transforming the content, and (iii) adding the first transformed  
12 content to the mobile gateway cache, are performed in connection with obtaining  
13 transformed content for a first of the two or more mobile clients, and wherein the steps for  
14 (iv) querying the mobile gateway cache, and (v) providing the first transformed content in  
15 response to the query for content, are performed in connection with obtaining transformed  
16 content for a second of the two or more mobile clients.

17

18     17. A method as recited in claim 16 wherein the step for providing the first  
19 transformed content comprises the act of sending the first transformed content to the two or  
20 more mobile clients.

21

22     18. A method as recited in claim 16 wherein the content comprises a notification.

1       19. A method as recited in claim 12 wherein the content is identified by a  
2 uniform resource identifier.

3  
4       20. A method as recited in claim 19 wherein the uniform resource identifier  
5 comprises a uniform resource locator.

6  
7       21. A method as recited in claim 12 further comprising steps for:

8               transforming the content according to a second transform, thereby creating a  
9 second transformed content, wherein the second transform is based on one or more  
10 operating characteristics of a second mobile client;

11               adding the second transformed content to the mobile gateway cache;

12               querying the mobile gateway cache for the content, the query including a  
13 second transform identifier; and

14               in response to the query for content, providing the second transformed  
15 content.

16  
17       22. A method as recited in claim 12 wherein the content comprises a first portion  
18 of other content, the other content including the first portion and a second portion, the  
19 method further comprising steps for:

20               querying the mobile gateway cache for the other content; and

21               in response to the query for the other content, providing the first transformed  
22 content.

1           23. A method as recited in claim 22 further comprising steps for:  
2                   caching the second portion of the other content in a mobile gateway cache;  
3                   transforming the second portion of the other content according to a transform,  
4                   thereby creating a second portion transformed content, wherein the transform is  
5                   based on one or more operating characteristics of at least one mobile client;  
6                   adding the second portion transformed content and a transform identifier to  
7                   the mobile gateway cache; and  
8                   in response to the query for other content, providing the second portion  
9                   transformed content.

1        24. In an computerized system that includes a content server, a mobile gateway,  
2 and one or more mobile clients, wherein the mobile gateway transforms content received  
3 from the content server based on one or more operating characteristics of at least one mobile  
4 client, and wherein the at least one mobile client is unaware of the specific transform applied  
5 to the content, a method of storing transformed content at the mobile gateway so that the  
6 transformed content may be sent to the at least one mobile client, the method comprising the  
7 acts of:

8            receiving content at a mobile gateway;

9            applying a first transform to the content, thereby creating a first transformed  
10 content, the first transform specifically considering one or more operating  
11 characteristics of at least one mobile client; and

12            storing the first transformed content in a mobile gateway cache, wherein the  
13 first transformed content is identified by a first transform identifier.

15        25. A method as recited in claim 24 wherein the content comprises a notification.

17        26. A method as recited in claim 24 wherein the content is identified by a  
18 uniform resource identifier.

20        27. A computer program product comprised of machine-executable instructions  
21 for performing the acts of the method recited in claim 24.

1 28. A method as recited in claim 24 further comprising the acts of:  
2 applying a second transform to the content, thereby creating a second  
3 transformed content, the second transform specifically considering one or more  
4 operating characteristics of a second mobile client; and  
5 storing the second transformed content in the mobile gateway cache.

1        29. In an computerized system that includes a content server, a mobile gateway,  
2 and one or more mobile clients, wherein the mobile gateway transforms content received  
3 from the content server based on one or more operating characteristics of at least one mobile  
4 client, and wherein the at least one mobile client is unaware of the specific transform applied  
5 to the content, a computer program product for implementing a method of obtaining  
6 transformed content from the mobile gateway so that the transformed content may be sent to  
7 the at least one mobile client, comprising:

8                    a computer readable medium for carrying machine-executable instructions  
9 for implementing the method at a mobile gateway; and

10                    wherein said method is comprised of machine-executable instructions for  
11 performing the acts of:

12                    receiving content at a mobile gateway;

13                    applying a first transform to the content, thereby creating a first  
14 transformed content, the first transform specifically considering one or more  
15 operating characteristics of at least one mobile client;

16                    storing the first transformed content in a mobile gateway cache;

17                    requesting the content from the mobile gateway cache, wherein the  
18 request includes a first transform identifier; and

19                    in response to the request for content, returning the first transformed  
20 content.

22        30. A computer program product as recited in claim 29 wherein the method is  
23 comprised further of machine-executable instructions for performing the act of storing the  
24 content in the mobile gateway cache.

1       31. A computer program product as recited in claim 29 wherein the mobile  
2 gateway includes mobile client data associating the first transform with the at least one  
3 mobile client, the method comprised further of machine-executable instructions for  
4 performing the acts of:

5           receiving a request for the content from the at least one mobile client;  
6           retrieving the first transform identifier from the mobile client data; and  
7           sending the first transformed content to the at least one mobile client.

8

9       32. A computer program product as recited in claim 29 wherein the method is  
10 comprised further of machine-executable instructions for performing the act of receiving  
11 from the content source, content addressed to two or more mobile clients, wherein the acts  
12 of (i) receiving content at a mobile gateway, (ii) applying a first transform to the content,  
13 and (iii) storing the first transformed content in a mobile gateway cache, are performed in  
14 connection with obtaining transformed content for a first of the two or more mobile clients,  
15 and wherein the acts of (iv) requesting the content from the mobile gateway cache, and  
16 (v) returning the first transformed content in response to the request for content, are  
17 performed in connection with obtaining transformed content for a second of the two or more  
18 mobile clients.

19

20       33. A computer program product as recited in claim 32 wherein the method is  
21 comprised further of machine-executable instructions for performing the act of sending the  
22 first transformed content to the two or more mobile clients.

1       34. A computer program product as recited in claim 29 wherein the method is  
2 comprised further of machine-executable instructions for performing the acts of:

3               applying a second transform to the content, thereby creating a second  
4 transformed content, the second transform specifically considering one or more  
5 operating characteristics of a second mobile client;

6               storing the second transformed content in the mobile gateway cache;

7               requesting the content from the mobile gateway cache, wherein the request  
8 includes a second transform identifier; and

9               in response to the request for content, returning the second transformed  
10 content.

11  
12       35. A computer program product as recited in claim 29 wherein the content  
13 comprises a first portion of other content, the other content including the first portion and a  
14 second portion, the method comprised further of machine-executable instructions for  
15 performing the acts of:

16               requesting the other content from the mobile gateway cache; and

17               in response to the request for the other content, returning the first transformed  
18 content.

1       36. A computer program product as recited in claim 35 wherein the method is  
2 comprised further of machine-executable instructions for performing the acts of:

3                   requesting the second portion of the other content from the content source;

4                   storing the second portion of the other content in the mobile gateway cache;

5                   applying a transform to the second portion of the other content, thereby  
6 creating a second portion transformed content, the transform specifically considering  
7 one or more operating characteristics of one or more mobile clients;

8                   storing the second portion transformed content in the mobile gateway cache;

9                   and

10                   in response to the request for the other content, returning the second portion  
11 transformed content.

12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

WORKMAN, NYDEGGER & SEELEY  
A PROFESSIONAL CORPORATION  
ATTORNEYS AT LAW  
1000 EAGLE GATE TOWER  
60 EAST SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111